EUROPEAN PATENT OFFICE

IN RE APPLICATION OF	: XL GENERATION INC.
FOR	: Improved underpad system
NO.	: International Application No. PCT/CA2002/001533
INTERNATIONAL FILING DATE	: 11/10/2001
EXAMINER	: Authorized Officer
INTERNATIONAL PATENT CLASSIFICATION (IPC)	: B32B7/02
ATTORNEY DOCKET NO.	: 08319-003

Montreal, Quebec, Canada
July 16, 2004

AMENDMENTS AFTER WRITTEN OPINION PURSUANT TO PCT RULE 66

European Patent Office
D-80298 Munich

Dear Sir:

The present is in response to the Written Opinion of May 17, 2004, due Saturday July 17, 2004.

Please amend the application as follows:

IN THE SPECIFICATION

Please replace current page 4 with amended page 4 enclosed herewith. The expression "extended polypropylene" has been replaced with "expanded polypropylene".

IN THE CLAIMS

Please replace the present claim pages 9 and 10 containing claims 1 to 6 with the new claim pages 9 and 10 containing currently pending claims 2, 5 7, 8 and 9, amended claims 1, 4 and 6 and new claims 10 to 13 enclosed herewith.

Please note that claim 3 as been cancelled.

REMARKS

The specification and claim number 6 have been amended to replace "extended polypropylene" by the proper name "expanded polypropylene". Support for the amendment can be found in the specification on page 5, lines 21 to 26.

Claims 1 and 4 have been amended to further distinguish the invention from the prior art cited in the International Search Report. Similarly, claims 10 to 13 have been added for the same purpose.

In light of the above, the applicant respectfully requests favourable reconsideration of the present application.

BROUILLETTE KOSIE PRINCE

Brouillette Kosie Prince

Their patent agents
Robert Brouillette

Encls. Amended page 4 of the specification
New claim pages 9 and 10

wherein said middle layer is compressed before said top layer and said bottom layer for low impact and shocks, and the said first thickness and the said third thickness remains the same.

There is further provided an underpad system with enhanced impact and shock absorbency properties which comprises:

a top layer made of ~~extended polypropylene~~expanded polypropylene having a first thickness and a first density;

a middle layer made of polyurethane foam having a second thickness and a second density;

a bottom layer made of ~~extended polypropylene~~expanded polypropylene having a third thickness and a third density.

Other aspects and many of the attendant advantages will be more readily appreciated as the same becomes better understood by reference to the following detailed description and considered in connection with the accompanying drawings in which like reference symbols designated like elements throughout the figures.

The features of the present invention which are believed to be novel are set forth with particularity in the appended claims.

Brief description of figures

Figure 1a is an isometric view of the improved underpad system in accordance with the invention;

Figure 1b is schematic side view showing the sandwiched layers of the underpad system shown in fig. 1.

Figure.2a is a side view showing a soccer ball rolling on top of the underpad system shown in fig. 1.

Figure 2b is a side view showing a soccer ball bouncing on top of the underpad system shown in fig. 1.

Claims

1. An underpad system with enhanced impact and shock absorbency properties which comprises:

   a top layer made of a first compressible material having a first thickness and a first density;

   a middle layer made of a second compressible material having a second thickness and a second density;

   a bottom layer made of a third compressible material having a third thickness and a third density;

   wherein said second density is lower than said first density and said third density and said middle layer has a higher compressibility than ~~is compressed before~~ said top layer and said bottom layer ~~for low impact and shocks, and the said first thickness and the said third thickness remains the same~~.

2. An underpad system, as claimed in claim 1, wherein said first and third material is the same.

~~3.An underpad system, as claimed in claim 2, wherein said second material is more easily compressed than said first material and said third material.~~

4. An underpad system, as claimed in claim 1, wherein the said top layer has a higher compressibility than ~~is compressed before~~ the said bottom layer.

5. An underpad system, as claimed in claim 1, wherein the said bottom layer absorbs the excess impact and shock that is not absorbed by the said middle and the said top layer.

6. An underpad system with enhanced impact and shock absorbency properties which comprises:

   a top layer made of ~~extended polypropylene~~expanded polypropylene having a first thickness and a first density;

   a middle layer made of polyurethane foam having a second thickness and a second density;

a bottom layer made of ~~extended polypropylene~~expanded polypropylene having a third thickness and a third density.

7. An underpad system, as claimed in claim 6, wherein the said first thickness is equal to the said third thickness.

8. An underpad system, as claimed in claim 6, wherein the said first density is equal to the said third density.

9. An underpad system, as claimed in claim 6, wherein the said top layer is the same as the said bottom layer.

10. An underpad system with enhanced impact and shock absorbency properties as described in claim 1, wherein:
the top layer and the bottom layer are made of expanded polypropylene;
the third thickness is less than the first thickness;
the third density is higher than the first density.

11. An underpad system, as claimed in claim 10, wherein said middle layer is made of polyurethane foam.

12. An underpad system with enhanced impact and shock absorbency properties as described in claim 1, wherein:
the top layer and the bottom layer are made of expanded polypropylene;
the third thickness is higher than the first thickness;
the third density is lower than the first density.

13. An underpad system, as claimed in claim 12, wherein said middle layer is made of polyurethane foam.

wherein said middle layer is compressed before said top layer and said bottom layer for low impact and shocks, and the said first thickness and the said third thickness remains the same.

There is further provided an underpad system with enhanced impact and shock absorbency properties which comprises:

a top layer made of expanded polypropylene having a first thickness and a first density;

a middle layer made of polyurethane foam having a second thickness and a second density;

a bottom layer made of expanded polypropylene having a third thickness and a third density.

Other aspects and many of the attendant advantages will be more readily appreciated as the same becomes better understood by reference to the following detailed description and considered in connection with the accompanying drawings in which like reference symbols designated like elements throughout the figures.

The features of the present invention which are believed to be novel are set forth with particularity in the appended claims.

Brief description of figures

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Claims

1. An underpad system with enhanced impact and shock absorbency properties which comprises:

    a top layer made of a first compressible material having a first thickness and a first density;

    a middle layer made of a second compressible material having a second thickness and a second density;

    a bottom layer made of a third compressible material having a third thickness and a third density;

    wherein said second density is lower than said first density and said third density and said middle layer has a higher compressibility than said top layer and said bottom layer.

2. An underpad system, as claimed in claim 1, wherein said first and third material is the same.

3 (cancelled)

4. An underpad system, as claimed in claim 1, wherein the said top layer has a higher compressibility than the said bottom layer.

5. An underpad system, as claimed in claim 1, wherein the said bottom layer absorbs the excess impact and shock that is not absorbed by the said middle and the said top layer.

6. An underpad system with enhanced impact and shock absorbency properties which comprises:

    a top layer made of expanded polypropylene having a first thickness and a first density;

    a middle layer made of polyurethane foam having a second thickness and a second density;

    a bottom layer made of expanded polypropylene having a third thickness and a third density.

7. An underpad system, as claimed in claim 6, wherein the said first thickness is equal to the said third thickness.

8. An underpad system, as claimed in claim 6, wherein the said first density is equal to the said third density.

9. An underpad system, as claimed in claim 6, wherein the said top layer is the same as the said bottom layer.

10. An underpad system with enhanced impact and shock absorbency properties as described in claim 1, wherein:

the top layer and the bottom layer are made of expanded polypropylene;

the third thickness is less than the first thickness;

the third density is higher than the first density.

11. An underpad system, as claimed in claim 10, wherein said middle layer is made of polyurethane foam.

12. An underpad system with enhanced impact and shock absorbency properties as described in claim 1, wherein:

the top layer and the bottom layer are made of expanded polypropylene;

the third thickness is higher than the first thickness;

the third density is lower than the first density.

13. An underpad system, as claimed in claim 12, wherein said middle layer is made of polyurethane foam.